

## Technical Data Sheet

### *Alcryn* 1070BK EXT BLK



Melt Processable Rubber

#### Product Description

*Alcryn* 1070BK EXT BLK is a Melt Processable Rubber material and is typically used in Blow Molding, Calendering, Extrusion, Vacuum Forming applications. Features include: Fast Molding Cycle, Good Weather Resistance, High Heat Resistance, Noise Damping, Oil Resistant, Ozone Resistant, Recyclable Material, and Vibration Damping.

|                          |                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processing Method</b> | Blow Molding; Calendering; Extrusion; Vacuum Forming                                                                                                                                  |
| <b>Attribute</b>         | Fast Molding Cycle; Good Weather Resistance; High Heat Resistance; Noise Damping; Oil Resistant; Ozone Resistant; Recyclable Material; Vibration Damping                              |
| <b>Forms</b>             | Pellets                                                                                                                                                                               |
| <b>Appearance</b>        | Black                                                                                                                                                                                 |
| <b>Application</b>       | Cable Jacketing; Coating Applications; Fabric Coatings; Flexible Grips; Gaskets; General Purpose; Handles; Hose; Overmolding; Profiles; Seals; Tubing; Weatherstripping; Wire & Cable |

| Typical Properties                               | Nominal Value | Units             | Test Method |
|--------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                  |               |                   |             |
| Density                                          | 1.23          | g/cm <sup>3</sup> | ISO 2781    |
| Density - Specific Gravity                       | 1.23          | g/cm <sup>3</sup> | ASTM D471   |
| Change in Volume                                 |               |                   |             |
| (in Reference Fuel B, 27 °C, 168 hr)             | 30            | %                 | ASTM D471   |
| (in Reference Fuel B, 27 °C, 168 hr)             | 30            | %                 | ISO 1817    |
| (in ASTM #1 Oil, 100 °C, 168 hr)                 | -9.0          | %                 | ISO 1817    |
| (in ASTM #1 Oil, 100 °C, 168 hr)                 | -9.0          | %                 | ASTM D471   |
| (in IRM 903 Oil, 100 °C, 168 hr)                 | 25            | %                 | ASTM D471   |
| (in IRM 903 Oil, 100 °C, 168 hr)                 | 25            | %                 | ISO 1817    |
| (in Water, 100 °C, 168 hr)                       | 8.0           | %                 | ASTM D471   |
| (in Water, 100 °C, 168 hr)                       | 8.0           | %                 | ISO 1817    |
| Melt Viscosity, (190 °C, 300 sec <sup>-1</sup> ) | 740           | Pa·s              | ASTM D3835  |
| <b>Mechanical</b>                                |               |                   |             |
| Tensile Stress at 100%                           |               |                   |             |
| (1.90 mm)                                        | 5.30          | MPa               | ASTM D412   |
| (1.90 mm)                                        | 5.30          | MPa               | ISO 37      |
| (125 °C, 1.90 mm)                                | 5.30          | MPa               | ISO 188     |
| (125 °C, 1.90 mm)                                | 5.30          | MPa               | ASTM D573   |

|                                                                |         |       |            |
|----------------------------------------------------------------|---------|-------|------------|
| Torsion Modulus                                                |         |       |            |
| (24 °C, 1.9 mm)                                                | 2.2     | MPa   | ASTM D1043 |
| Compression Molded                                             |         |       |            |
| (-20 °C, 1.9 mm)                                               | 14.3    | MPa   | ASTM D1043 |
| Compression Molded                                             |         |       |            |
| Tensile Set                                                    | 10      | %     | ASTM D412  |
| Clash-Berg Modulus, (-34 °C)                                   | 68.9    | MPa   | ASTM D1043 |
| Tensile Strength at Yield                                      |         |       |            |
| (1.90 mm)                                                      | 12.4    | MPa   | ASTM D412  |
| (125 °C, 1.90 mm)                                              | 13.1    | MPa   | ASTM D573  |
| Tensile Stress at Yield                                        |         |       |            |
| (1.90 mm)                                                      | 12.4    | MPa   | ISO 37     |
| (125 °C, 1.90 mm)                                              | 13.1    | MPa   | ISO 188    |
| Tensile Strain at Break                                        |         |       |            |
| (1.90 mm)                                                      | 270     | %     | ISO 37     |
| (125 °C, 1.90 mm)                                              | 240     | %     | ISO 188    |
| Tensile Elongation at Break                                    |         |       |            |
| (125 °C, 1.90 mm)                                              | 240     | %     | ASTM D573  |
| (1.90 mm)                                                      | 270     | %     | ASTM D412  |
| Tear Strength, (Die C, 1.90 mm)                                | 28.0    | kN/m  | ASTM D624  |
| <b>Impact</b>                                                  |         |       |            |
| Ductile/Brittle Transition Temperature                         | -53     | °C    | ISO 812    |
| <b>Hardness</b>                                                |         |       |            |
| Change in Shore Hardness in Air, (Shore A, 125 °C, 168 hr)     | -2.0    |       | ISO 188    |
| Shore Hardness, (Shore A, 1.90 mm, Compression Molded)         | 72      |       | ISO 868    |
| Change in Durometer Hardness in Air, (Shore A, 125 °C, 168 hr) | -2.0    |       | ASTM D573  |
| Durometer Hardness, (Shore A, 1.90 mm, Compression Molded)     | 72      |       | ASTM D2240 |
| <b>Additional Information</b>                                  |         |       |            |
| Compression Set                                                |         |       |            |
| (24 °C, 22 hr, Method B)                                       | 15      | %     | ASTM D395  |
| (100 °C, 22 hr, Method B)                                      | 55      | %     | ASTM D395  |
| (24 °C, 22 hr)                                                 | 15      | %     | ISO 815    |
| (100 °C, 22 hr)                                                | 55      | %     | ISO 815    |
| Taber Abrasion Resistance, (CS-17 Wheel, 1000 g, 1000 Cycles)  | 7.00    | mg    | ASTM D1044 |
| <b>Injection Parameters</b>                                    |         |       |            |
|                                                                | Nominal |       |            |
|                                                                | Value   | Units |            |
| Processing (Melt) Temp                                         | 177     | °C    |            |